

Amendments to the Claims:

Claims 1-12 (Cancelled).

13. (New) A pseudomorphic high electron mobility transistor comprising:
a semi-insulating GaAs substrate;
an epitaxial layer including a plurality of layers sequentially stacked on said GaAs substrate, said sequentially-stacked layers including:
 a GaAs buffer layer;
 an AlGaAs buffer layer;
 an undoped InGaAs channel layer;
 a first undoped AlGaAs spacer layer;
 a carrier supply layer;
 a second undoped AlGaAs spacer layer;
 an undoped InGaP Schottky layer; and
 a doped GaAs cap layer;
a source electrode and a drain electrode formed on and in ohmic contact with said doped GaAs cap layer; and
a gate electrode formed on said undoped InGaP Schottky layer so that said gate electrode extends through said doped GaAs cap layer, said gate electrode being composed of material whose main constituents are La and B.

14. (New) The pseudomorphic high electron mobility transistor of claim 13, wherein said gate electrode is composed of LaB_6 .

15. (New) A pseudomorphic high electron mobility transistor comprising:
a semi-insulating InP substrate;
an epitaxial layer including a plurality of layers sequentially stacked on said InP substrate, said sequentially-stacked layers including:

an InAlAs buffer layer;
an undoped InGaAs channel layer;
an undoped InAlGaAs spacer layer;
a carrier supply layer;
an undoped InAlAs layer;
an undoped InP Schottky layer; and
a doped InGaAs cap layer;

a source electrode and a drain electrode formed on and in ohmic contact with said doped InGaAs cap layer; and

a gate electrode formed on said undoped InP Schottky layer so that said gate electrode extends through said doped InGaAs cap layer, said gate electrode being composed of material whose main constituents are La and B.

16. (New) The pseudomorphic high electron mobility transistor of claim 15, wherein said gate electrode is composed of LaB_6 .